

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD**

HEDGEROW PLANTING

(Ft.)

CODE 422

DEFINITION

Establishment of dense vegetation in a linear design to achieve a natural resource conservation purpose.

PURPOSE

Providing at least one of the following conservation functions:

- Food, cover and corridors for terrestrial wildlife.
- Food and cover for aquatic organisms that live in watercourses with bank-full width less than 5 feet.
- Living fences
- Boundary delineation
- Contour guidelines
- Screens and barriers to noise and dust
- Improvement of landscape appearance

CONDITIONS WHERE PRACTICE APPLIES:

This practice applies wherever it will accomplish at least one of the purposes stated above.

CRITERIA

General Criteria Applicable To All Purposes

Hedgerows shall be established using woody plants, or perennial bunch grasses producing erect stems attaining average heights of at least 3 feet and persisting well over winter.

Plants selected must be suited and adapted to the soils, climate and conservation purpose. Refer to "Idaho Tree Planting Handbook" for suitable plant species.

No plant listed by the state as a noxious weed shall be established in a hedgerow.

The practice shall be protected from livestock grazing and trampling to the extent necessary to ensure that it will perform the intended purpose(s).

Competing vegetation shall be controlled until the hedgerow becomes established. Control shall continue beyond the establishment period, if necessary.

All planned work shall comply with federal, state, and local laws and regulations.

Additional Criteria for Wildlife Food, Cover, and Corridors

Establish at least two species of native vegetation.

Selected plants shall provide cover and/or food to support the landowner's wildlife objectives.

Minimum hedgerow width, at maturity, shall be 15 feet. This may necessitate the establishment of more than one row of plants.

In plantings adjacent to small watercourses, the plantings shall be site-adapted, large enough at maturity, and installed close enough to shade the watercourse. Minimum hedgerow width, at maturity, shall be 35 feet.

Additional Criteria For Living Fences

Selected plants shall attain a size adequate to create a barrier to contain livestock or humans, as needed.

If the purpose is to contain livestock, selected plants shall not be poisonous or hazardous to the animals.

Additional Criteria For Boundary Delineation

Hedgerows shall be aligned along boundaries of fields, or forestlands to differentiate land management units.

Additional Criteria For Contour Guidelines

Hedgerows shall be aligned so they provide permanent contour markers supporting implementation of Contour Farming (330) or Contour Stripcropping (585). Refer to those conservation practices standards for alignment criteria.

Additional Criteria For Screens, Noise and Dust Barriers

Screening hedgerows provide privacy, hide unsightly areas from view or reduce noise.

Hedgerows shall be located where they most completely obstruct a line of sight, offensive sound, or dust.

Selected plants shall attain a height and fullness sufficient to break the line of sight, or baffle sound and dust.

Additional Criteria For Improvement of Landscape Appearance

The hedgerow design shall meet the aesthetic objectives of the landowner.

Plants shall be selected based upon the landowner's preferences for color, texture, and growth habit.

CONSIDERATIONS

General

Hedgerows can be planned in combination with other practices to develop complete conservation systems that enhance landscape aesthetics, reduce soil erosion, improve sediment trapping, improve water quality, and provide wildlife habitat.

Hedgerows following land contours create meandering lines on the landscape, produce a natural appearance, and increase the availability of "edge" wildlife habitats.

Hedgerows containing a mixture of native shrubs and small trees provide greatest environmental benefits.

Use of bareroot and containerized seedlings will accelerate hedgerow development.

Consider the amount of shading a hedgerow will provide at maturity. Shading may impact growth of adjacent plants, microclimate, and aesthetics.

Limiting renovation events to one-third of a hedgerow's length or width will prevent sudden elimination of the practice's wildlife habitat function.

Periodic root pruning can reduce nutrient and water robbing from adjacent cropland.

Consider avoiding the use of plants that spread by root suckers as hedgerow may expand beyond the desired treatment area.

Wildlife Food, Cover and Corridors

Hedgerows can provide travel lanes, or corridors that allow wildlife to move safely across a landscape.

Generally, wider corridors accommodate more wildlife use.

Linking fragmented habitats may increase wildlife use of an area.

In grassland ecosystems, hedgerows may adversely affect area-sensitive nesting birds by fragmenting habitat patches and increasing the risk of predation.

Hedgerows can complement the availability of naturally occurring wildlife foods.

Hedgerows can provide wildlife with cover for feeding, loafing, nesting and caring for young.

Dense or thorny shrub thickets provide songbirds with important nesting sites and a refuge to escape predators.

Establishment of evergreen plants provides year-round concealment and thermal cover for wildlife.

Establishment of herbaceous vegetation along the edges of a hedgerow can further enhance the habitat functions of a hedgerow.

Installation of artificial nest boxes with predator guards can encourage cavity-nesting birds and small mammals to utilize a hedgerow.

Consider planting trees, shrubs and herbaceous plants that attract and provide food and cover habitat for pollinators and beneficial insects. See Idaho Biology Technical Note No. 1; Pollinators.

Living Fences

Thorny shrubs and trees can improve a living fence's barrier effect.

Screens and Noise Barriers

From eye-level, hedgerows reduce the line-of-sight across open areas, concealing objects behind them from view.

Consider the design from viewpoints on both sides of the screen.

Locate noise barriers as close to the source of noise as possible.

Combination of shrubs and/or trees can create more effective screens than single species plantings.

Evergreens provide foliage that can maintain a screen's year-round effectiveness.

Improving Landscape Appearance

Consider plants' seasonal display of colors on bark, twigs, foliage, flowers, and fruit.

Consider plants' growth habits (outline, height and width).

Water Quality and Quantity

Water quality benefits may arise from:

- Arresting sediment movement and trapping sediment-attached substances.
- Infiltration and assimilation of plant nutrients.
- Water cooling effects resulting from increased shade on small watercourses.

A hedgerow will increase surface water infiltration by improving soil structure around its root zone. However, evapotranspiration may reduce groundwater recharge benefits.

Incidental Trapping of Snow or Sand

Although not a primary purpose, hedgerows may incidentally trap wind blown snow or sand.

Consider installing hedgerows on alignments that prevent trapping and accumulation of snow and sand on public roads.

Refer to the Windbreak/Shelterbelt Establishment (380) standard for criteria when snow or sand trapping is a primary conservation purpose.

PLANS AND SPECIFICATIONS

Plans and specifications for this practice shall be prepared for each site. Plans and specifications shall be recorded using approved specification sheets, job sheets, or narrative documentation in the conservation plan, or other acceptable documentation.

ID-CPA-027 Windbreak-Shelterbelt Planting Specification will be prepared for applying this practice for each site - see Idaho Plant Materials Technical Note No. 43 Tree Planting, Care and Management for additional guidance.

OPERATION AND MAINTENANCE

Supplemental planting may be required when survival is too low to produce a continuous hedgerow.

Vegetation shall be protected from unwanted fire and grazing throughout its life span.

Pests shall be monitored and controlled.

Periodic applications of nutrients may be needed to maintain plant vigor.

Renovation activities shall be scheduled to prevent disturbance during the wildlife nesting season.

REFERENCES

National Biology Handbook, Part 614.4, "Conservation Corridor Planning at the Landscape Level". Natural Resources Conservation Service, August 1999.

NRCS – Idaho Biology Technical Note

No. 1 – Pollinators

Idaho Field Office Technical Guide, Section II contains soils interpretations for windbreaks. Section VI contains Technical Notes under Forestry and Plant Materials that should be utilized as design and maintenance references.

The Idaho Tree Planting Handbook and North Dakota Tree Handbook are additional references that will assist the planner.